

Claims

1. An operating mechanism (1) for actuating at least one parking brake, particularly for motor vehicles, comprising:
  - 5 a. a first driving unit (10, 30, 90) for driving a first actuating element (40);
  - b. a second driving unit (60, 80, 100) for driving a second actuating element (50), wherein the second actuating element (50) engages said first actuating element (40);
  - 10 c. wherein due to the relative movement of the first actuating element (40) with respect to the second actuating element (50) at least one braking cable (110, 120) is tightened or released for actuating of the at least one parking brake.
- 15 2. Operating mechanism (1) according to claim 1, comprising a first actuating element configured as a nut (40) and a second actuating element configured as a spindle (50), wherein the spindle (50) is screwed into the nut (40).
- 20 3. Operating mechanism (1) according to claim 1 or 2, wherein the driving units (10, 30, 90 or 60, 80, 100) each comprise an electric motor (10, 80) and a gearbox.
- 25 4. Operating mechanism (1) according to one of the claims 1 to 3, wherein the driving units (10, 30, 90, 60, 80, 100) further comprise:
  - 30 a. at least one driving pinion (30, 60) in each driving unit (10, 30, 90, 60, 80, 100) for transmitting a torque from the driving unit (10, 30, 90, 60, 80, 100) to the nut (40) or the spindle (50);

- b. at least one support body (90, 100) in each driving unit (10, 30, 90, 60, 80, 100) for axial displacement of the at least one driving pinion (30, 60) respectively by the axial displacement of nut (40) or spindle (50); and
  - 5       c. at least one shaft connection (20, 70) in each driving unit (10, 30, 90, 60, 80, 100) for the displaceable support of the respectively at least one driving pinion (30, 60).
- 10      5. Operating mechanism (1) according to claim 4, wherein the shaft connections (20, 70) comprise splined shaft connections, feather connections or polygon connections.
- 15      6. Operating mechanism (1) according to one of the claims 1 to 5, further comprising braking cables (110, 120), that are connected to support bodies (90, 100).
- 20      7. Operating mechanism (1) according to claim 6, wherein the tensile force of the braking cables (110, 120) is compensated due to the displaceable mounting of the driving pinions (30, 60) on the shaft connections (20, 70).
- 8. Operating mechanism (1) according to one of the claims 1 to 7, further comprising a housing (130).
- 25      9. Method for actuating of parking brakes with an operating mechanism (1), comprising a pair of two actuating elements (40, 50), engaging each other, wherein a first driving unit (10, 30, 90) drives a first actuating element (40) and a second driving unit (60, 80, 100) drives a second actuating element (50), and wherein for tightening or releasing of at least one braking cable (110, 120) the driving units (10, 30, 90, 60, 80, 100) are driven with the same as well as 30     with the opposing rotational direction.

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10. Method according to claim 9, wherein the driving units (10, 30, 90, 60, 80, 100) are driven with different rotational speeds.

11. Method according to one of the claims 9 or 10, wherein at the same rotational direction of the driving units (10, 30, 90, 60, 80, 100) the difference of the rotational speed between the first actuating element (40) and the second actuating element (50) determines the velocity, by which the at least one braking cable (110, 120) is tightened or released.